

2014 FICE Engineering Excellence Award Competition

FDOT Received Three Grand Awards



Original or Innovative Application of New or Existing Techniques
Future Value to the Engineering Profession
Social, Economic, and Sustainable Design Considerations
Complexity
Exceeding Client/Owner Needs

By Debora Hall, Florida Institute of Consulting Engineers

The Florida Institute of Consulting Engineers' (FICE) Engineering Excellence Awards (EEA) recognize engineering projects for their original or innovative applications to complex projects and studies. This year, three FDOT projects were grand awards winners. The ceremony was held during the 98th Annual Summer Conference and Exposition's FICE Banquet on August 8, 2014 at the Marco Island Marriott.

All grand award winners also participated nationally in "the Academy Awards of the engineering industry," the 2014 American Council of Engineering Companies' (ACEC) EEA competition. For FDOT projects, two or your three FICE grand awards received the 2014 National Recognition awards.

The FICE Public Relations Committee selected the distinguished panel of judges representing government, media, transportation, education, environment/water resources, public works and architecture. Assembled in Tampa late last November were Deputy General Counsel John W. Costigan, JD, Office of General Counsel Florida Department of Agriculture and Consumer Services; Editor-in-Chief Scott Judy, *ENR Southeast*; Terry Puckett, PE, Florida Department of Transportation District I and VII Geotechnical Office; Civil and Environmental Engineering Professor and Department Chair Manjriker Gunaratne, PhD, PE, University of South Florida; Vice President/Sr. Engineer Manager Ron S. Beladi, PE, Neel-Schaffer Inc.; FES President Glenn E. Forrest, PE, Utility Manager, MacDill Air Force Base for Government Services Group Inc.; and 2013 President American Institute of Architects-Florida Dan Kirby, AIA, AICP, LEED AP with Jacobs/Kling Stubbins, respectively.

The judges rated projects and studies on the basis of uniqueness and innovative applications; future value to the engineering profession; perception by the public; social, economic, and sustainable design considerations; complexity; and successful fulfillment of client/owners' needs, including schedule and budget.



FICE Grand Award Winners

by firm/project/client/category

AVCON Inc.

SR 600 Pavement Rehabilitation

Client: FDOT District V

Category: Transportation

and ACEC National Recognition Award Winner

SR 600 Concrete Rehabilitation between Clark Bay Rd. and Tomoka Farms Rd. was a joint effort project between AVCON Inc. and FDOT.

The existing concrete pavement was exhibiting signs of extreme deterioration and the roadway was subjected to flooding during heavy storms. Visual distress included significant settlement of concrete pavement slabs, shattering of pavement slabs, alligator cracking and general pavement

distress. The roadway was constructed within the 100-year flood plain, and the presence of unsuitable soil had been identified during geotechnical investigations.

The challenges of the project included finding a cost-effective solution to the pavement rehabilitation while maintaining the existing traffic level of approximately 18,000 vehicles per day. Final design and construction implemented innovative technologies including longitudinally post-tensions, pre-cast, pre-stressed concrete pavement under the Federal Highway Administration's "Highway for Life Program." This innovative process was utilized for the first time in Florida and will serve as a test section for FHWA, FDOT and other states in evaluating this pavement alternative that can minimize construction time and increase quality for concrete pavement projects. The project also included a construction process that recycled the existing concrete on-site and re-used the material as a base layer under the new pavement.

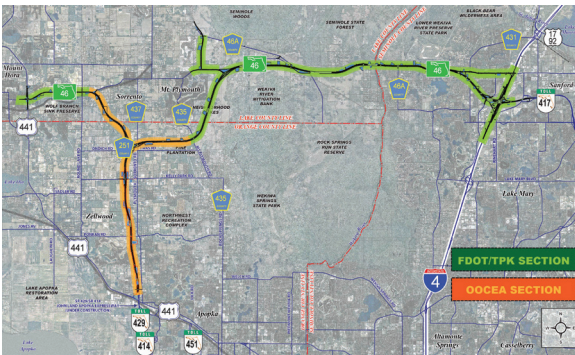


Ayres Associates
Courtney Campbell Multiuse Trail Bridge
Client: FDOT District VII
Category: Structural
and ACEC National Recognition Award Winner

The Tampa Bay area is home to a large network of trails. Until recently, however, one crucial component of its trail system was missing: a connecting piece between Pinellas and Hillsborough counties. Without this vital connector, pedestrians and other users were forced to maneuver across the multi-lane Courtney Campbell Causeway, where traffic whizzed by at 60 mph. The newly opened Courtney Campbell Multiuse Trail Bridge provides the vital link outdoor enthusiasts sought.

The 3,258 foot-long pedestrian bridge—designed by Ayres Associates and constructed by American Bridge—runs adjacent to the busy Causeway. At over 45 feet above water, the sleek bridge is the only high-level pedestrian bridge in Florida. And, while elegant, the bridge is also structurally solid—designed to withstand the same vessel collision forces as would have been required for a vehicular bridge over the same waterway. Ayres also designed new seawalls, shore protection, access road, trail, stormwater treatment, and parking.

Since its September opening, the bridge has been well received by the community and praised for its public safety improvements. Additionally, the design and construction addressed both the sensitive marine environment and the challenging variability in foundation soil profiles and bedrock layers.



CH2M HILL
Wekiva Parkway (SR 429) PD&E Study
Client: FDOT District V
Category: Studies/Research

Tremendous growth in Central Florida has put a strain on the transportation system, and the Orlando Beltway System was planned to relieve this pressure. However, the northwestern section—Wekiva Parkway—crosses the Wekiva River, which is a Federal Wild and Scenic River, the Wekiva River basin and the Florida Aquatic Preserve. Efforts and studies in the 1980s were met with opposition from numerous environmental interest groups due to the impacts to environmental lands and wildlife.

A collaborative effort of numerous public officials, concerned citizens, environmental interest groups and permit agencies led to passage of the Wekiva Parkway and Protection Act, which set the ground rules to advance the project into the NEPA phase. As a result of the extraordinary work done by the Wekiva Parkway Working Group and the approval of the Protection Act, the FHWA issued a Class of Action requiring an EA—rather than a more intensive EIS—which was a significant turning point for the project.

The PD&E project was led by two owners—Florida Department of Transportation and Orlando-Orange County Expressway Authority—and required consensus building among three counties and 10 municipalities, more than 200 businesses and over 14,000 property owners.

Through the intense outreach program, stakeholders were empowered to provide direct feedback, which drove publicly-acceptable solutions for alignments, typical sections, structure types, and context-sensitive solutions. These solutions set aside more than 3,400 acres of land for conservation, drastically decreased motorist/wildlife collision potential, and turned environmental activists into advocates, resulting in a signed FONSI in May 2012.

Ultimately, the completed Wekiva Parkway will enhance regional connectivity, lower environmental impacts, support future population growth, enhance and expand conservation lands, improve wildlife habitat and corridors, thereby improving safety for users and wildlife alike. ■